

Work Order ID 138233

138233

Page 1

Tuesday, October 27, 2015 11:06:11 AM

Item ID: D5159-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Seat Rib
Start Date: 10/26/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 10/26/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: ML3 Date: OCT 28 2015 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D5159	A

110		0.00				2	0		JL-LIS/11/12
110									
Cold Saw	Memo	0.01							
Hyd Mech	CUT TO BLANK								

120	Manufacture as per dwg	0.00				2	1		JL-LIS/11/16
120									
Mill Conv	Memo	0.03							
Conventional Milling Machine	DRILL HOLES AND MILL ENDS AS PER DWG								
	ORIENT EXTRUSION TO AVOID DRILLING IN MATERIAL SEAM IF PRESENT**								

130	QC2- Inspect parts off machine FAI/FAIB	0.00				2	2		JL-LIS/11/16
130									
QC	Memo	0.00							
Quality Control									

PTO →

DQA:

Date: 15/12/09



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 15/12/01

Work Order update only ☐

Work Order: <u>138233</u> Part No. <u>D5159-3</u> NCR No. <u>15-5473</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table> <tr> <td>Skid-tube</td><td>☐</td> <td>Cross tube</td><td>☐</td> <td>Water Jet</td><td>☐</td> <td>Engineering</td><td>☐</td> </tr> <tr> <td>Machining</td><td>☒</td> <td>Small Fab</td><td>☐</td> <td>Prod. Eng. Coord.</td><td>☐</td> <td>Quality</td><td>☐</td> </tr> <tr> <td>Thermoforming</td><td>☐</td> <td>Finishing</td><td>☐</td> <td>Rec/Store/Packaging</td><td>☐</td> <td>Other</td><td>☐</td> </tr> <tr> <td>Large Fab</td><td>☐</td> <td>Composite</td><td>☐</td> <td>Supplier</td><td>☐</td> <td></td><td></td> </tr> </table>						Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐	Machining	☒	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐	Large Fab	☐	Composite	☐	Supplier	☐																																																																																																
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Item ID: D5159-3 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Seat Rib
Start Date: 10/26/2015 Start Qty: 2.00 *2* Cust Item ID:
Required Date: 10/26/2015 Req'd Qty: 2.00 *2* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		B.A 15/11/17		2	φ		DAS 08 9-89
150 *150* Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 M 130746. Memo START TIME: 3:20 OVEN TEMPERATURE: 300 FINISH TIME: 3:50	0.00 0.00				2	φ	15-11-18	DAS 34 9-89
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				(2)			DAS 38 9-89 NOV 19 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____				
Misidentified ☐	Past Due ☐					

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170

Identify as per dwg & Stock Location: ~~S1508~~ 0.00***170***

Packaging

Memo

0.00

Packaging

S1 S06

2

MLJ

15-11-19

180

QC21- Final Inspection - Work Order Release 0.00

180

QC

Memo

0.00

Quality Control

MLJ

15-11-20

MLJ 15-11-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																				
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
		OTHER :																																																																					

Picklist Print

Page 1

Tuesday, October 27, 2015 11:06:11 AM

Work Order ID: 138233

138233

Parent Item: D5159-3

D5159-3

Parent Item Name: Seat Rib

Start Date: 10/26/2015

Required Date: 10/26/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 14.10.03 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TS0.750W.049		Purchased			No		f	1,210.858		2.636842			

M304TS0 750W 049

304 SQ Tube .75x.75x.049W

Location

Loc Qty

Loc Code

WA004

1210.858768

M131868

25.436368

M132744

285.4224

M133163

600

M133417

300

3821 J.C.L. 15/11/12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

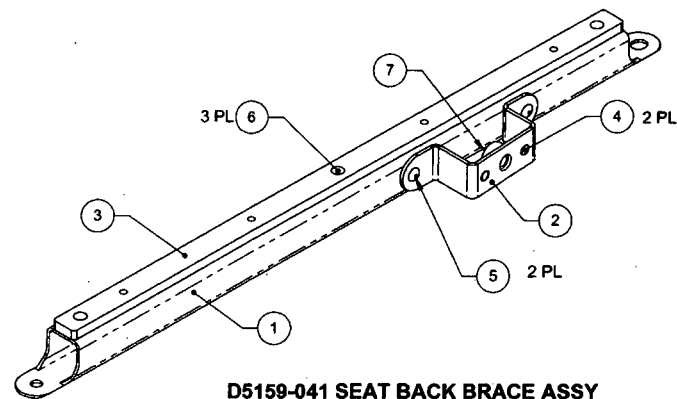
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

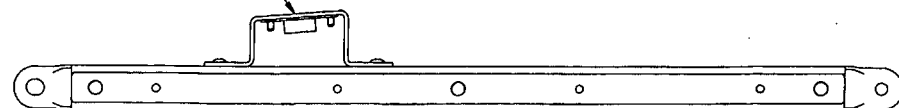
Root Cause		FAULT CATEGORY									
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

ITEM	QTY	P/N	DESCRIPTION
	X	D5159-041	SEAT BACK BRACE ASSY
1	1	D5159-1	RIB
2	1	D5160-1	SEAT BRACE BRACKET
3	1	D5160-5	SHIM
4	2	MS20426AD3-4	RIVET, SOLID, CSK
5	2	MS20600M4W3	RIVET, BLIND (MONEL)
6	3	MS20601M4W4	RIVET, BLIND, CSK (MONEL)
7	1	MS21059L4	NUTPLATE



D5159-041 SEAT BACK BRACE ASSY

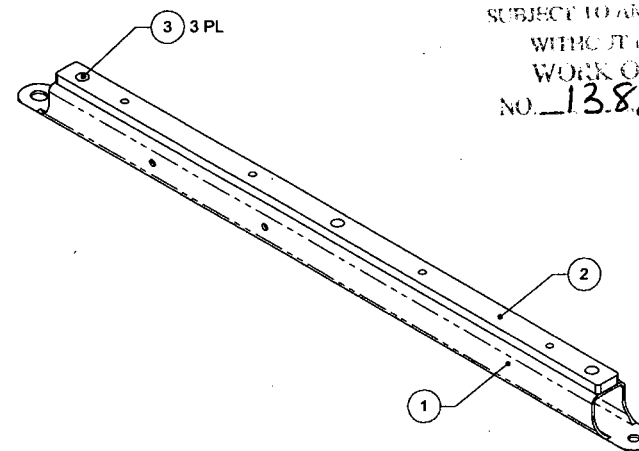
NOTE BRACKET
ANGLE



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D5159-041" AND BATCH NUMBER BXXXXX PER QSI 044, 6.1.
- 7) WEIGHT: 0.89 lbs

ITEM	QTY	P/N	DESCRIPTION
	X	D5159-043	SEAT BACK BRACE ASSY
1	1	D5159-1	RIB
2	1	D5160-5	SHIM
3	3	MS20601M4W4	RIVET, BLIND, CSK (MONEL)



D5159-043 SEAT BACK BRACE ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D5159-043" AND BATCH NUMBER BXXXXX PER QSI 044, 6.1.
- 7) WEIGHT: 0.82 lbs

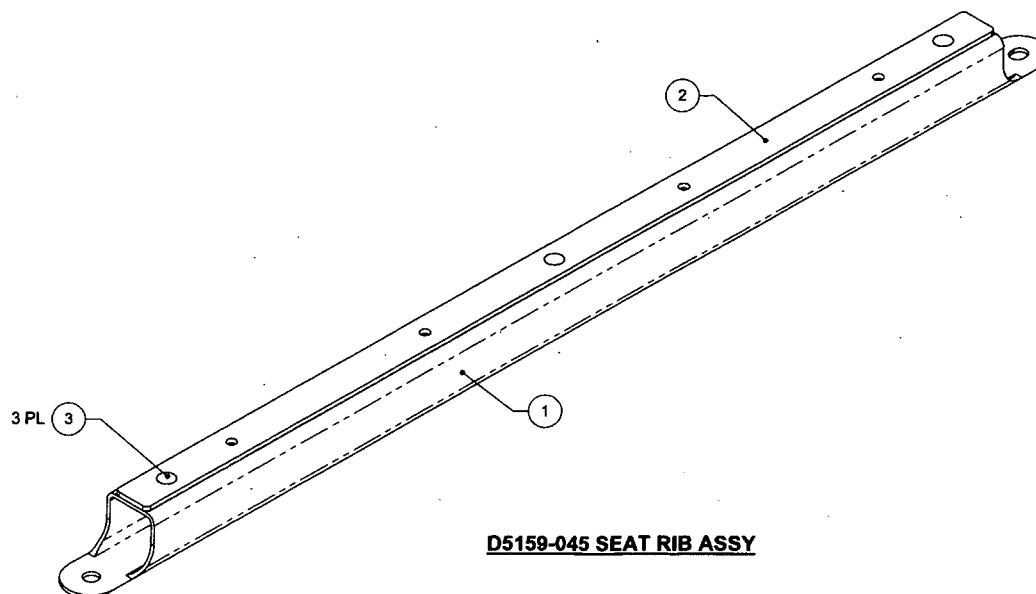
RELEASED

2015 FEB 04
ECN 15-522 9

A		NEW ISSUE		AJS	14.09.24
REV.	DESCRIPTION			BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. A	
DRAWN	AJS			SHEET 1 OF 3	
CHECKED	AP	DRAWING NO. D5159		SCALE	
MFG. APPR.	DD	TITLE		NTS	
APPROVED	HS	SEAT BRACE ASSY			
DE APPR.	DS	DATE 14.09.24		COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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WITHOUT NOTICE
WORK ORDER
NO. 138233.M5
15-10-28

ITEM	QTY	P/N	DESCRIPTION
	X	D5159-045	SEAT RIB ASSY
1	1	D5159-3	SEAT RIB
2	1	D5160-3	SHIM
3	3	MS20601M4W4	RIVET, BLIND, CSK (MONEL)



D5159-045 SEAT RIB ASSY

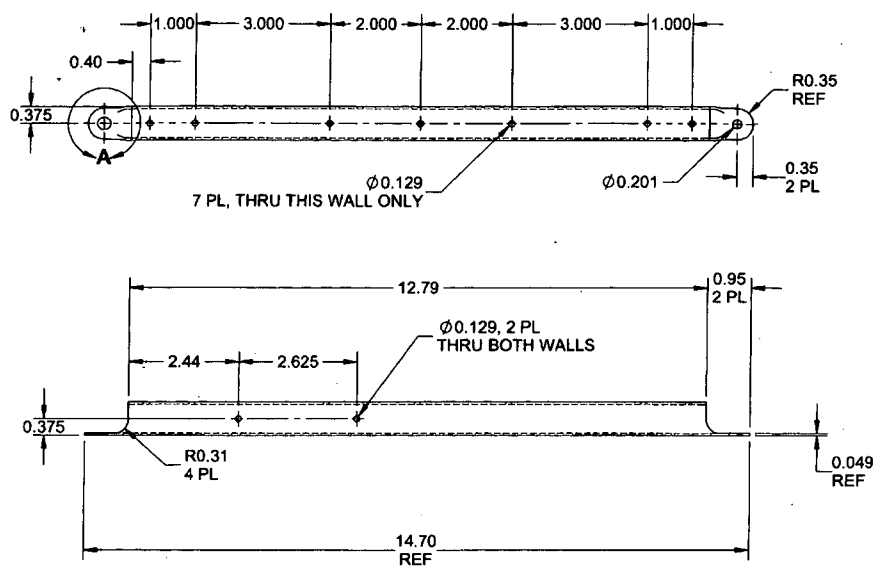
RELEASED

2015 FEB 04 *on*

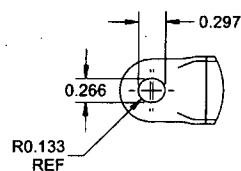
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D5159-045" AND BATCH NUMBER BXXXXX
PER QSI 044, 6.1.
- 7) WEIGHT: 0.62 lbs

APPROVED	DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	AJS		
	CHECKED	AP	DRAWING NO.	REV. A
	MFG. APPR.	DD	D5159	SHEET 2 OF 3
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	SEAT BRACE ASSY	NTS
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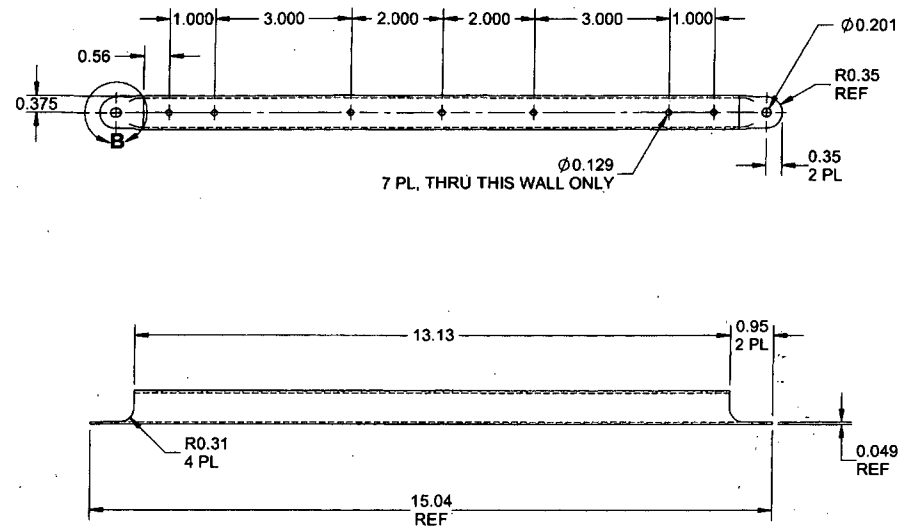
D5159-1 RIB



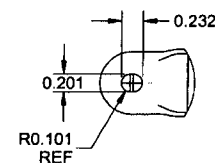
DETAIL A
SCALE 2X

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.75 X 0.75 X 0.049 WALL
PER ASTM A554/A269 MILL FINISH
REF DART SPEC. M304TS0.750W.049
- 2) FINISH: POWDER COAT GREY SANDEX (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT -1: 0.49 lbs
-3: 0.50 lbs



D5159-3 SEAT RIB



DETAIL B
SCALE 2X

RELEASED

2015 FEB 04

APPROVED	DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	AJS		
	CHECKED	AP	DRAWING NO.	REV. A
	MFG. APPR.	DD	D5159	SHEET 3 OF 3
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	SEAT BRACE ASSY	NTS
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